

IN THE DRAWINGS

Please amend the drawings as follows:

In FIG. 1A, reference number "10" is amended to "10a."

Add new FIG. 1C.

REMARKS

Claims 59, 75, 84 and 85 are amended, no claims are canceled, and no claims are added; as a result, claims 59-88 are now pending in this application.

Applicant acknowledges acceptance of the drawings filed on March 4, 2004, as indicated in the Office Action Summary at checkboxes 10 and 10 a), and thanks the Examiner for this acceptance. Further, Applicant acknowledges the recognition of the claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f) in the Office Action Summary at checkboxes 12 and 12 a). Applicant also thanks the Examiner for this acknowledgement of the claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Interview Summary

Applicant thanks Examiner Tuan T. Lam for the courtesy of a series of telephone interviews conducted with Applicant's representative Ann M. McCrackin. Applicant's representatives appreciate Examiner Lam's cooperative spirit and positive attitude with regards to achieving a resolution in the prosecution of this application.

In the initial phone interview on June 29, 2005 between Examiner Lam and Applicant's representative Ann M. McCrackin, the pending claims 59-88 were discussed in view of FIG. 9 of the Japanese patent to Kono (JP 60-224319). Examiner Lam agreed to fax to Applicant's representatives an English translation of the Kono document. Examiner Lam also agreed to a follow-up telephone interview after Applicant's representatives had the opportunity to study the English translation of the Kono document.

In a follow-up phone interview on August 2, 2005 with Examiner Lam and Applicant's representative Ann M. McCrackin, the pending claims 59-88 were again discussed in view of the Japanese patent to Kono (JP 60-224319). Applicant's representatives and Examiner Lam also discussed amendments to FIG. 1A and the addition of a new figure showing the circuit details of FIG. 2. Examiner Lam indicated that he would reconsider the rejections of claims 59-88 if a response was filed.

In the Drawings

FIG. 1A has been amended in order to change reference number "10" to "10a." The amended FIG. 1A appears on the sheet labeled "REPLACEMENT SHEET" along with FIG. 1B. FIG. 1B has not been amended. New FIG. 1C is added. New FIG. 1C appears on a sheet labeled "NEW SHEET." As described above in the summary of the telephone interview with Examiner Lam, these amendments were discussed with Examiner Lam, and Examiner Lam agrees that the amendments to FIG. 1A and the addition of FIG. 1C, wherein FIG. 1C illustrates circuit level details of the latch circuits as shown in FIG. 2, do not represent new matter. Therefore, Applicant respectfully request that the next Official Communication indicate that the amendment to FIG. 1A and the new FIG. 1C are accepted.

§102 Rejection of the Claims

Claims 59-70, 72-73, 75-82, and 84-85 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kono (JP 60-224319). Applicant respectfully traverses the rejection of claims 59-70, 72-73, 75-82, and 84-85.

Applicable Law

Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *In re Dillon* 919 F.2d 688, 16 USPQ 2d 1897, 1908 (Fed. Cir. 1990) (en banc), cert. denied, 500 U.S. 904 (1991). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, "[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP § 2131.

To serve as an anticipation when a reference is silent about the asserted inherent characteristic, the gap in the reference may be filled with recourse to extrinsic evidence. But,

such evidence must make clear that "the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." *Continental Can Co. v. Monsanto Co.*, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991).

The Kono document fails to teach all of the elements of claims 59-70, 72-73, 75-82, and 84-85.

The Kono document fails to disclose in a single prior art reference each of the elements recited in claims 59-70, 72-73, 75-82, and 84-85. For example, claims 59 and 84 recite, "a first generating means for generating a first periodic signal; a second generating means for generating a second periodic signal which is in anti-phase with the first periodic signal," and further, "wherein said first and second generating means are arranged to generate the respective first and second periodic signals as analogue periodic signals having an amplitude which causes said transistors to be not fully open or fully closed but to act as variable resistances."

In another example, claim 75 recites, "applying a first periodic signal to be frequency divided by the frequency divider circuit to a control electrode of the respective transistor of the or each odd amplifier stage; and applying a second periodic signal which is in anti-phase with the first periodic signal to a control electrode of the respective transistor of the or each even amplifier stage," and further, "wherein said applying steps apply analogue periodic signals to said control electrodes, which analogue periodic signals have an amplitude which cause said transistors to not fully open or fully close but to act as a variable resistances."

In a further example, claim 85 recites, "a first generating circuit operable to generate a first periodic signal; a second generating circuit operable to generate a second periodic signal which is in anti-phase with the first periodic signal," and further, "wherein said first and second generating circuits are arranged to generate the respective first and second periodic signals as analogue periodic signals having an amplitude which causes said transistors to be not fully open or fully closed but to act as variable resistances."

Applicant submits that Kono fails to teach these elements as recited in claims 59, 75, 84, and 85. A previous Office Action in this matter mailed on May 13, 2003 admits as much, wherein the previous Office Action on page 3 states, "The difference seen between Kouno reference and the present invention is that Kouno does not specify the first and second periodic signals as analog periodic signals having an amplitude which causes said transistors to be not

fully open or fully closed but to act as variable resistance as called for in claims 59, 75 and 84." Claim 85 was added subsequent to this Office Action. In contrast, the present Office Action on page 3 states, "although the first and second generating mean are not shown, the transistors of the frequency divider are capable of receiving analog periodic signals so that not fully open and fully closed but to act as variable resistance as called for in claims 59, 75, 84 and 85." Applicant disagrees.

As noted above, anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. The fact that a transistor may be, while not admitting the circuits in Kono are, capable of receiving an analog periodic signal is not the standard used to determine when a reference anticipates a claim. Thus, the Office Action admits that Kono fails to show all of the elements in claims 59, 75, 84, 85. Because the Office Action fails to present any extrinsic evidence that would indicate that the elements recited in claims 59, 75, 84, and 85 - and admittedly not shown in Kono - are necessarily present in Kono, the Office Action fails to state a *prima facie* case of anticipation with respect to claims 59, 75, 84, and 85.

In a further example, claim 75 as amended now recites, "wherein each of the analog periodic signals is referenced to a same voltage supply." [Emphasis added]. In addition, claims 59, 84 and 85, as amended now recite,

wherein each of the transistors of each odd amplifier stage that is used to modulate the propagation delay through the odd amplifier stage references the first periodic signal to a voltage supply, and each of the transistors of each even amplifier stage that is used to modulate the propagation delay through the even amplifier stage references the second periodic signal to the same voltage supply. [Emphasis added].

By way of example, and not by way of limitation, attention is directed to FIG. 1C of the application, which includes latches 10A and 10B. As shown in FIG. 1C, latch 10A includes transistors N3 and N4 receiving the IN, or first periodic signal, and latch 10B includes transistors N3 and N4 receiving the INB, or second periodic signal. As shown in FIG. 1C, each of the instances of transistors N3 and N4 are referenced to the same voltage supply NSUP.

In contrast, FIG. 9 of Kono shows switches 7 and 8 receiving a CL1 input, referencing the CL1 input to the V_{SS} voltage level, wherein switches 10 and 11 are shown as receiving the CL2 input, and referencing the CL2 input to the V_{DD} voltage level. Thus, Kono fails to teach

referencing the first periodic signal and the second periodic signal to the same voltage supply, as recited in claims 59, 75, 84, and 85.

Claims 60-70 and 72-73 depend from claim 59, and claims 76-82 depend from claim 75. For reasons analogous to those stated above and additional elements in the claims, Applicant respectfully submits that the Office action fails to state a *prima facie* case of anticipation with respect to dependent claims 60-70, 72-73, and 76-82.

Summary

For at least the reasons argued above, Applicant believes they have overcome the 35 U.S.C. § 102(b) rejection of claims 59-70, 72-73, 75-82, and 84-85, and therefore respectfully requests the withdrawal of the rejection and reconsideration and allowance of claims 59-70, 72-73, 75-82, and 84-85.

§103 Rejection of the Claims

Claim 74 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kono (JP 60-224319). Claims 71 and 83 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kono in view of Maemura (U.S. Pat. No. 5,172,400). Claims 87 and 88 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kono. Applicant respectfully traverses each of the rejections of claims 71, 74, 83, 87, and 88.

All of the elements recited in claims 71, 74, 83, 87, and 88 are not found in Kono, and with regards to claims 71 and 83, all of the elements are not found in the proposed combination of Kono with Maemura.

Claims 71 and 74 depend from claim 59, claim 83 depends from claim 75, claim 87 depends from claim 84, and claim 88 depends from claim 85. Therefore, dependent claims 71, 74, 83, 87, and 88 include all of the elements recited in the claim from which they depend. Applicant believes they have established that claims 59, 75, 84, and 85 are not anticipated by Kono. Further, Applicant's representatives fail to find in Maemura a teaching or suggestion of, for example, a "first and second periodic signals as analogue periodic signals having an amplitude which causes said transistors to be not fully open or fully closed but to act as variable

resistances," as recited in claim 59. Therefore, Maemura fails to remedy the deficiencies of Kono.

Because all of the elements recited in claims 71, 74, 83, 87, and 88 are not taught or suggested in the proposed combination of Kono and Maemura, the rejections under 35 U.S.C. § 103(a) cannot stand. Applicant respectfully request withdrawal of the 35 U.S.C. § 103(a) rejections, and reconsideration and allowance of claims 71, 74, 83, 87, and 88.

Kono teaches away from the inclusion of the elements recited in claims 59, 75, 84, and 85.

The Office Action on page 3 urges that the circuit in Figure 9 of Kono is capable of receiving the analog periodic signals of claims 59, 75, 84, and 85 so that the transistors do not to fully open or fully close. However, the disclosure in Kono teaches away from operating transistors in the resistive range. Kono on page 5 states, "the transfer clock signal (CL1) is 'H,' the switching circuit (8) made up of an NMOS transistor is turned ON and forcibly becomes 'L' (V_{ss} level)." [Emphasis added]. Thus, Kono discloses forcing the transistors receiving the clock signal to the supply level, and thus teaches way from operating these transistors in a manner so that they act as variable resistors, as recited in claim 59, 75, 84, and 85. Therefore, the disclosure of Kono teaches away from the elements as recited in claims 59, 75, 84, and 85.

Summary

For at least the reasons argued above, Applicant believes they have overcome the 35 U.S.C. § 103(a) rejections of claims 71, 74, 83, 87, and 88, and therefore respectfully requests the withdrawal of the rejection and reconsideration and allowance of claims 71, 74, 83, 87, and 88.

Non-Rejected Claims

The Office Action fails to state a grounds for a rejection of claim 86. Therefore, Applicant respectfully requests that the next Official Communication indicate that claim 86 is allowed.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone applicant's attorney at (612) 349-9592 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

JAMES D. COLLIER ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 349-9587

Date Sept. 1, 2005

By Ann M. McCrackin
Ann M. McCrackin
Reg. No. 42,858

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 1 st day of September, 2005.

ANN M. MCCRACKIN

Name

Ann M. McCrackin

Signature